高氏柴胡之混合選種

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摘　要：二年生高氏柴胡 1261 株中選出 501 株優良單株，等比種子數目進行混合，選出 231 株優良單株，混合之後種植，新的族群之平均株高為 94~105cm，分枝 26~33，葉長 6.1~7.2cm，根重 84~108g，根直徑 1.43~2.36cm，根長 22~34cm，高氏柴胡的根重與地上部的莖直徑具有顯著正相關(相關係數 0.81)，選拔方向以莖的直徑較大、分枝數目較多、繖型花序數目較多與根不過分粗大為主，並選擇直立型、根高產及 Saikosaponin 含量較高的柴胡植株。植株的株高、株重、分枝、根長、根徑與根重間均有顯著正相關。柴胡皂素主要分佈於植物根部，且集中於根部較外層之皮層與韌皮部中，在根部組織中均含有，但由根粗部位往細部位遞增，根毛部位的含量最多，Saikosaponin 的含量與根粗成負相關，與根中韌皮部/木質部比例成正相關。柴胡在作物繁殖之分類上屬於常異交作物，花器構造小，人為雜交困難，其抽苔期、株高、分枝數、莖直徑等性狀在族群內之變異相當大，造成採收及利用上之不便。高氏柴胡為台灣特有之柴胡物種，多為野生採集使用，野性極強，但其柴胡皂素之含量據分析優於其他柴胡物種，因此值得開發利用，惟族群之變異程度相當大，故以混合選種法(mass selection)，利用抽苔期、株高、分枝數、莖直徑為選拔指標，分群選拔其根部的產量高及表現型能達一致，以改進族群。

Mass Selection for *Bupleurum Kao*

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Abstract: We selected 501 plants from the two-years planted population of 1261 plants *Bupleurum Kao* Leu chao et chuang, and used equal number of seeds each plants to sowing for mass selection. The average agronomic characters of new population was : height:94-105cm, branch:26-33, leaf length:6.1-7.2cm, root weight:84-108g, root diameter:1.43-2.36cm, root length:22-34cm. Root weight and stem diameter had positive correlation(correlation coefficient:0.81).The selection objective were longer stem diameter, more branch number, more flower number, and proper root diameter. In addition to, erect plant, high yield of root and more content of saikosaponin were be selected for cultured and medical use. Plant height, weight, branch, root length, root diameter, and root weight had positive correlation for each other. More content of saikosaponin were discovered from the cortex of root, phloem of root and root hair. The content of saikosaponin and root diameter had negative correlation. The agronomic variance of *Bupleurum Kao* were most significant in cultivated and wild population. *Bupleurum Kao* is a special species distributed in Taiwan of Buplever and the effective content was more superior than the other Buplever. It's a well used medically for liver health or hepatitis. The mass selection method is effective for breeding of *Bupleurum Kao*.